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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/516,111	03/01/2000	Keisuke Mitani	35.C14321	3018

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EXAMINER

TRAN, DOUGLAS Q

ART UNIT	PAPER NUMBER
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2624

DATE MAILED: 03/16/2004

7

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/516,111

Applicant(s)

MITANI, KEISUKE

Examiner

Douglas Q. Tran

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 09 January 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-15 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-15 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-2, 4-7, 9-12, and 14-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nagao et al. (US Patent No. 6,100,998) in combination with Adachi et al. (US Patent No. 5,768,489).

As to claim 1, Nagao teaches a printing control apparatus comprising expansion processing means (4 in fig. 1) for expanding printing data of a predetermined format (intermediate data) to image data of a format to be output to a printer, by a segment (col. 7, lines 38-40: the rasterizing processing unit has a plurality of the rasterizing processing means for processing the different type of input data from the intermediate data for each of two bands "col. 7, lines 47-53");

calculation means (i.e., 5 in fig. 1) for calculating, before the expansion processing is performed by the expansion processing means, a processing time (i.e., rasterizing processing time) necessary to expand the printing data to the image data for each segment (col. 7, lines 61-61-67: the rasterizing time predicting unit for predicting the rasterizing time for each band ; and

scheduling processing means (i.e., the output control unit 6 in fig. 1) for scheduling the expansion processing for each segment by the plural expansion processing means, based on the

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time calculated by the calculation means (col. 8, lines 1-12: under control of the output control unit 6, the rasterizing data from each band of the band buffer memories is outputted);

Although Nagao teaches expansion processing means have band raster memory areas to hold output images (col. 7, lines 47-53 describes that the rasterizing process unit 4 generates the print out data in band buffer memories "422 and 423 in fig. 10" inside the unit 4, and the unit 4 may has the two band buffer memories), Nagao does not teaches the plural expansion processing means and wherein the scheduling processing means schedules which segments should each of the plural expansion processing means perform the expansion process on.

Adachi teaches the plural expansion processing means (10-13 in fig. 1) and wherein the scheduling processing means (35 in fig. 3) schedules which segments should each of the plural expansion processing means (10-13 in fig. 3) perform the expansion process on (fig. 12 and col. 11, lines 1-50).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the rasterizing process unit 4 of Nagao to comprise the plural rasterizing processing means for performing the rasterizing segments which is scheduled by the scheduling means as taught by Adachi. The suggestion for modifying the rasterizing process unit 4 of Nagao can be reasoned by one of ordinary skill in the art as set forth above by Adachi because the modified rasterizing process unit 4 of Nagao would increase the efficiencies of the printing systems by processing a plurality of bands at the same time. Such modification allows the printing system to save the time for processing image data.

As to claim 2, Nagao and Adachi disclose every feature discussed in claim 1, and Nagao further teaches comprising transfer means for transferring the expanded image data to the printer

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(517 in fig. 25), and wherein the scheduling processing means further comprises judgment means for judging for each segment, based on the processing time calculated by the calculation means, whether or not the expansion processing is to be performed by the expansion processing means before the transfer of the image data is started, based on the time calculated by the calculation means (please see fig. 19 for processing from intermediate data per band to rasterizing time before established the order of band for printing or transferring); Also, Adachi teaches the above limitations (fig. 12, col. 11, lines 1-50).

As to claim 4, Nagao and Adachi disclose every feature discussed in claim 1, and Nagao further teaches reception means for receiving output data from a data processing apparatus; and conversion means for converting the received data into the printing data of the predetermined format (col. 7, lines 13-20).

As to claim 5, Nagao and Adachi disclose every feature discussed in claim 1, and Nagao further teaches wherein the printing data of the predetermined format is intermediate data of a format classified for each band (col. 7, lines 27-33).

As to claims 6-7, 9-10, Nagao and Adachi teach steps for performing the apparatus claims 1-2, 4-5 as indicated above.

As to claims 11-12, 14-15, Nagao and Adachi teach instructions for performing the apparatus claims 1-2, 4-5 as indicated above.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

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(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 3, 8 and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over the combination of Nagao and Adachi as applied to claims 2, 6, 11, and in combination with Watts et al. (US Patent No. 6,559,971).

As to claim 3, Nagao and Adachi disclose every feature discussed in claim 2.

However, Nagao and Adachi do not teach compression means for compressing the expanded image data for the segment to which it was judged by the judgment means that the expansion processing is to be performed by the expansion processing means before the transfer of the image data is started.

Watts teaches compression means for compressing the expanded image data (i.e., rasterizing data) for the segment to which it was judged by the judgment means that the expansion processing is to be performed by the expansion processing means before the transfer of the image data is started (col. 3, lines 43-47).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the image processing system of Nagao and Adachi for compressing the expanded image data (i.e., rasterized image data) before transferring to the printing unit as taught by Watts. The suggestion for modifying the system of Nagao and Adachi can be reasoned by one of ordinary skill in the art as set forth above by Watts because the modified systems would improve the capacity of the buffer memory to be compacted when storing the small amount of the compressed image data.

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As to claims 8 and 13, the combination of Nagao, Adachi and Watts teaches the method and instructions for performing the apparatus claim 3 as indicated above.

Response to Arguments and Amendment

Applicant's arguments filed have been fully considered but they are not persuasive.

Applicant asserted in pages 10 to 11 that “ Applicant submits that nothing has been found in Nagao et al. that would teach or suggest plural expansion processing means which expands printing data of a predetermined format to image data of a format to be output to a printer, and that scheduling processing means schedules which segments should each of the plural expansion processing means perform the expansion process on”. In reply, Nagao teaches expansion processing means (4 in fig. 1) for expanding printing data of a predetermined format (intermediate data) to image data of a format to be output to a printer, by a segment (col. 7, lines 38-40: the rasterizing processing unit has a plurality of the rasterizing processing means for processing the different type of input data from the intermediate data for each of two bands “col. 7, lines 47-53”). Although Nagao teaches expansion processing means have band raster memory areas to hold output images (col. 7, lines 47-53 describes that the rasterizing process unit 4 generates the print out data in band buffer memories “422 and 423 in fig. 10” inside the unit 4, and the unit 4 may has the two band buffer memories), Nagao does not teaches the plural expansion processing means and wherein the scheduling processing means schedules which segments should each of the plural expansion processing means perform the expansion process on.

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Adachi clearly teaches the plural expansion processing means (10-13 in fig. 1) and wherein the scheduling processing means (35 in fig. 3) schedules which segments should each of the plural expansion processing means (10-13 in fig. 3) perform the expansion process on (fig. 12 and col. 11, lines 1-50). Therefore, Adachi would modify to the deficiencies of the teaching of Nagao.

For the above reasons, it is believed that the cited prior art fully discloses the claimed invention and the rejection stand.

Conclusion

Applicant's amendment with respect to independent claims 1-43 have been considered but are moot in view of the new ground(s) of rejection. This action is made **final**.

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event,

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however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Douglas Q. Tran whose telephone number is (703) 305-4857 or E-mail address is Douglas.tran@uspto.gov.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (703) 305-4700.

Douglas Q. Tran
Mar. 09, 2004

A handwritten signature in black ink, appearing to read "Gabriel Garcia". The signature is fluid and cursive, with the first and last names being more prominent than the middle name.

GABRIEL GARCIA
PRIMARY EXAMINER